

Flight Scientist Report
Tuesday 03/30/2021 ACTIVATE RF58

Flight Type: Statistical Survey Flight
Flight Route: KLF1 KECG OXANA PERDO OXANA KECG KLF1

Special Notes: Morning flight of a 2 flight day. This one is focused on good cloud conditions moving towards Oxana and the southeast.

King Air

Pilot report (Wusk): Take-off 0801 Lndg 1125 3.4 hours

ACTIVATE dual aircraft (with HU25) science flight. UC12 crew was Coldsnow, Wusk, Shingler. 1st flight of a two-flight day. Planned route was KLF1 ECG OXANA PERDO OXANA ECG KLF1. Take-off was slightly early to help with afternoon flight timing. Take-off at 0801 and landed at 1125 for 3.4 hours. Flown as planned, at FL270, 4 sondes dropped. Aircraft performed well, no issues.

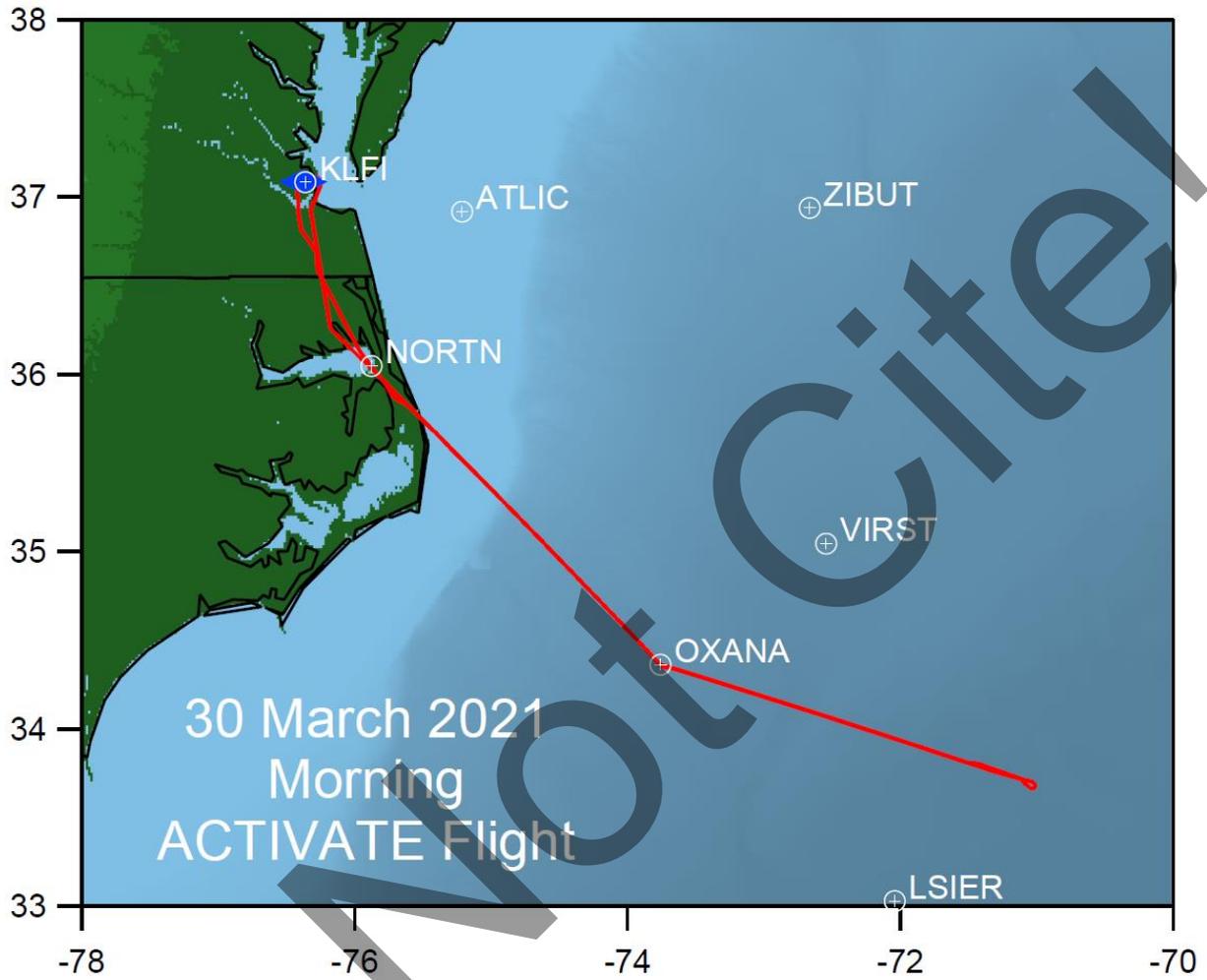
Flight scientist report (Shingler): The first of two joint flights for the day were flown out of AR8 down to OXANA and out to PERDO with a return track on the same line. The cloud scene was fairly consistent throughout the entire flight with a thin low-level cloud deck between ~4-6kft with some thin aerosol layers at higher altitudes above the cloud deck. 4 sondes were dropped on this flight (OXANA, end of leg, ~ONGOT, coast). All instruments were operating nominally.

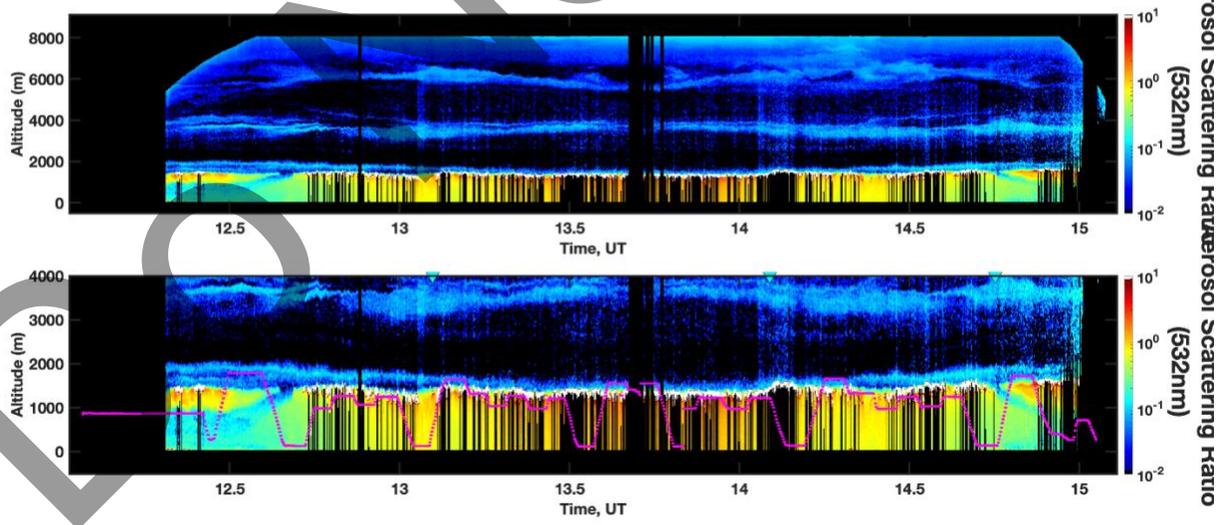
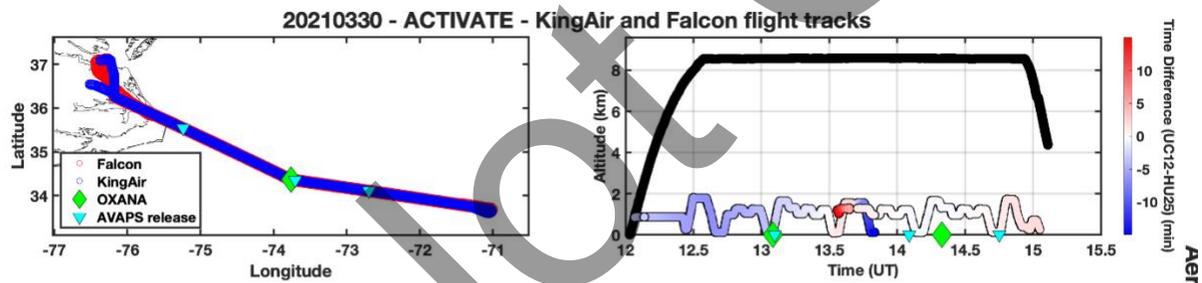
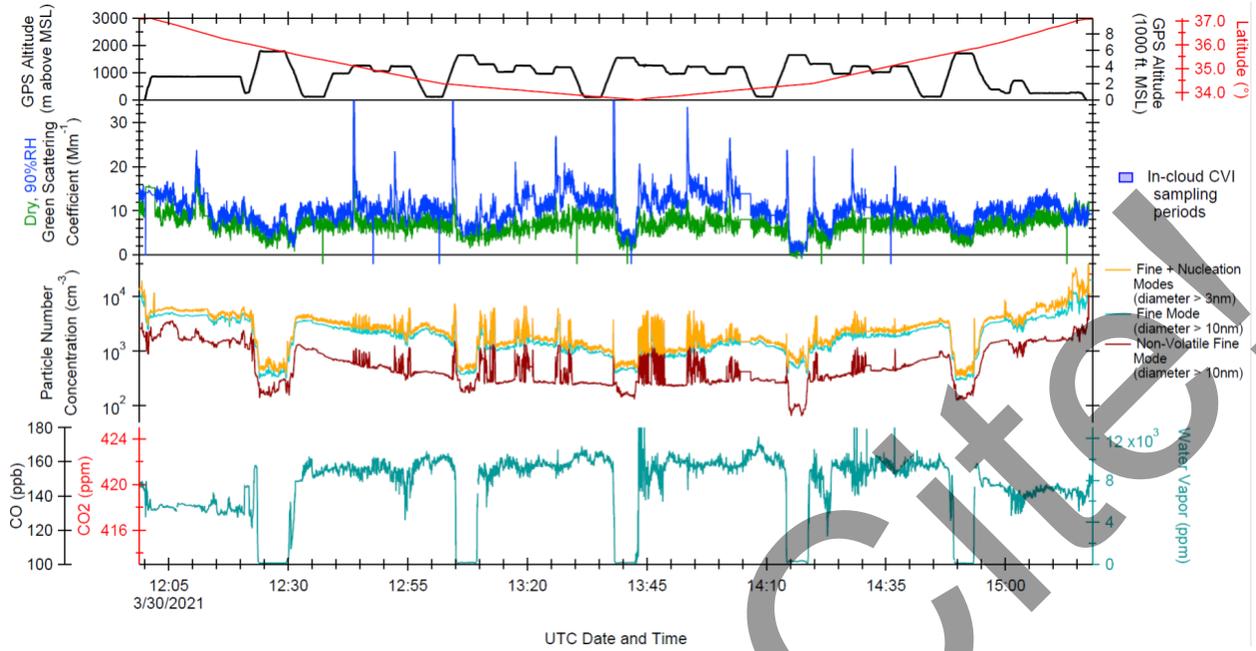
Falcon

Pilot report (Delaney): Science flight for the HU-25 in support of ACTIVATE Campaign #3, conducted cooperatively with the UC-12. Departed Rwy08 to ECG climbing to 3k ft MSL for initial transit. Research profiles conducted from ECG-OXANA-PERDO-OXANA-ECG-KLF1. Winds were light (<15 knots) and variable (120-210) at flight altitudes with a scattered offshore layer initially encountered from ~2-4 k FT MSL (ECG-OXANA), followed by a clear section approaching OXANA before re-entering layers outbound to PERDO. Both cloud and clear air modules were completed throughout the flight as conditions warranted, ranging from 500 – 5500 FT MSL. A temperature inversion was noted from ~2500-5500 ft MSL with a transition from ~4 to ~12 deg C, respectively. Aircraft geolocation was within ~20 nmi throughout the flight, and generally remained with ~10 nmi during the research-focused portion. All objectives were achieved and no system discrepancies were noted - pending post-flight data analysis.

Pilots: Baxley/Delaney
QNCs: Crosbie/Winstead

Flight scientist report (Crosbie): Nothing of specific note. Good cloud day.

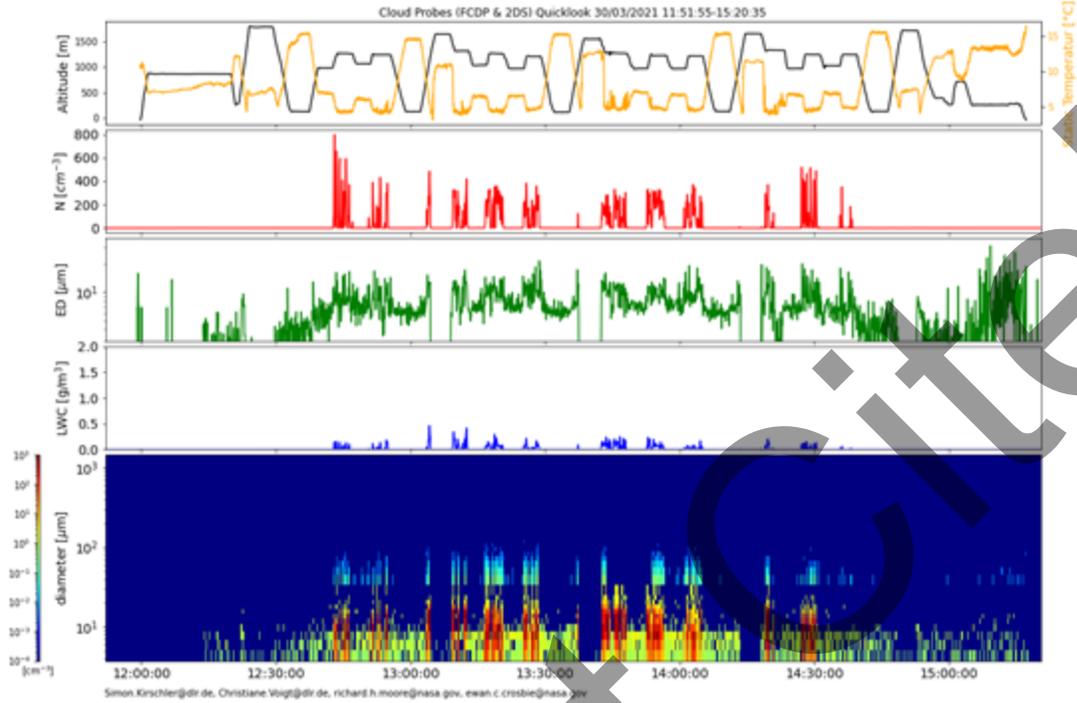




Quicklook ACTIVATE Cloud Probes (FCDP & 2DS) Quicklook

preliminary data, only for quicklook use

Simon Kirschler, Christiane Voigt, Richard Moore, Ewan Crosbie



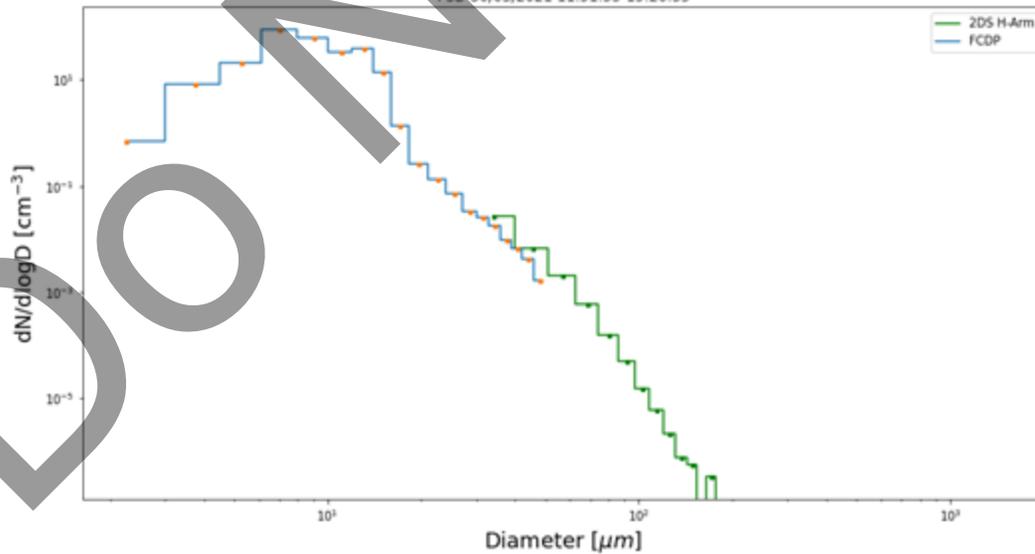
PSD ACTIVATE

preliminary data, only for quicklook use

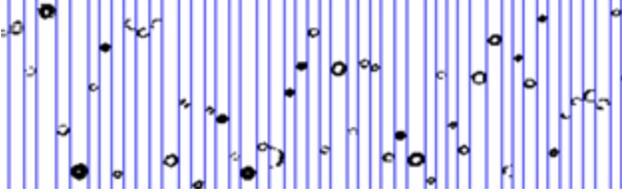
Simon Kirschler, Christiane Voigt, Richard Moore, Ewan Crosbie



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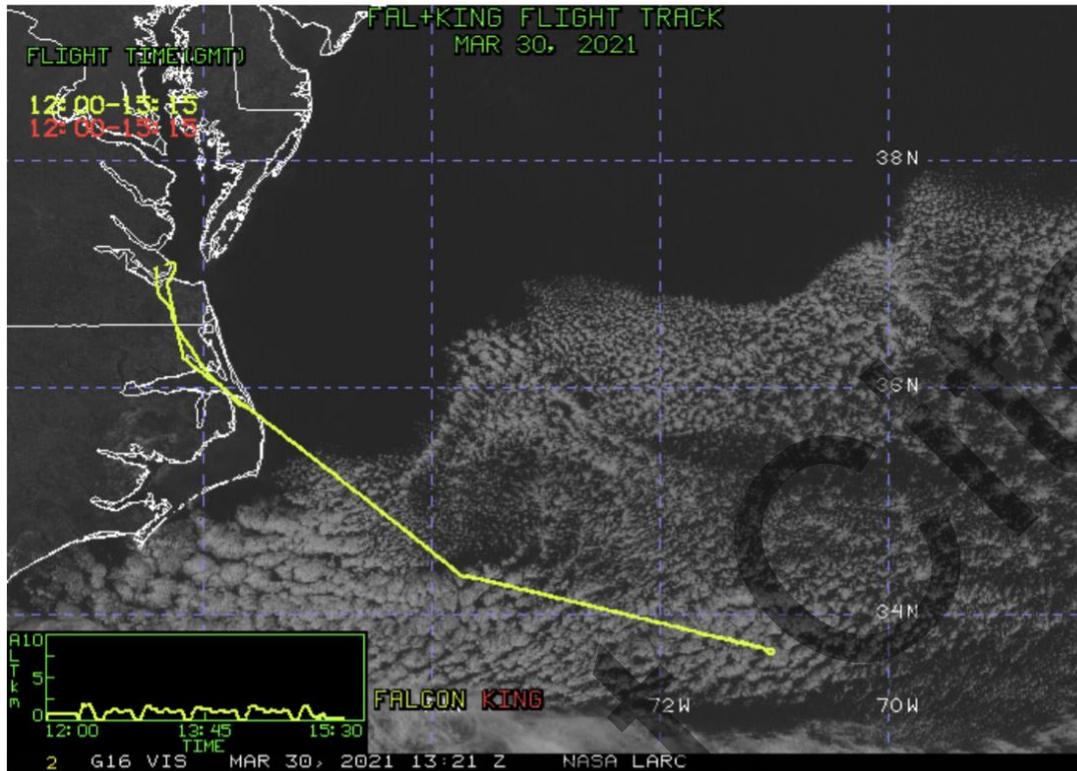
Simon.Kirschler@dlr.de, Christiane.Voigt@dlr.de, richard.h.moore@nasa.gov, ewan.c.crosbie@nasa.gov



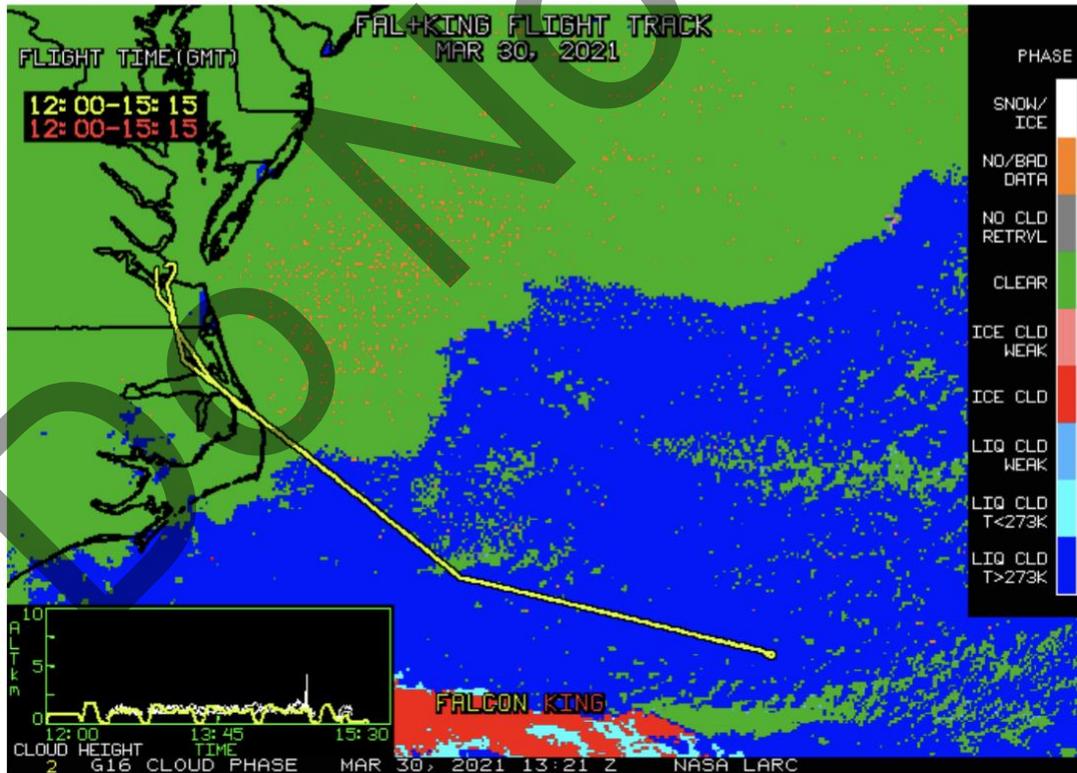
Only pure liquid clouds without precipitation.

Do Not Cite!

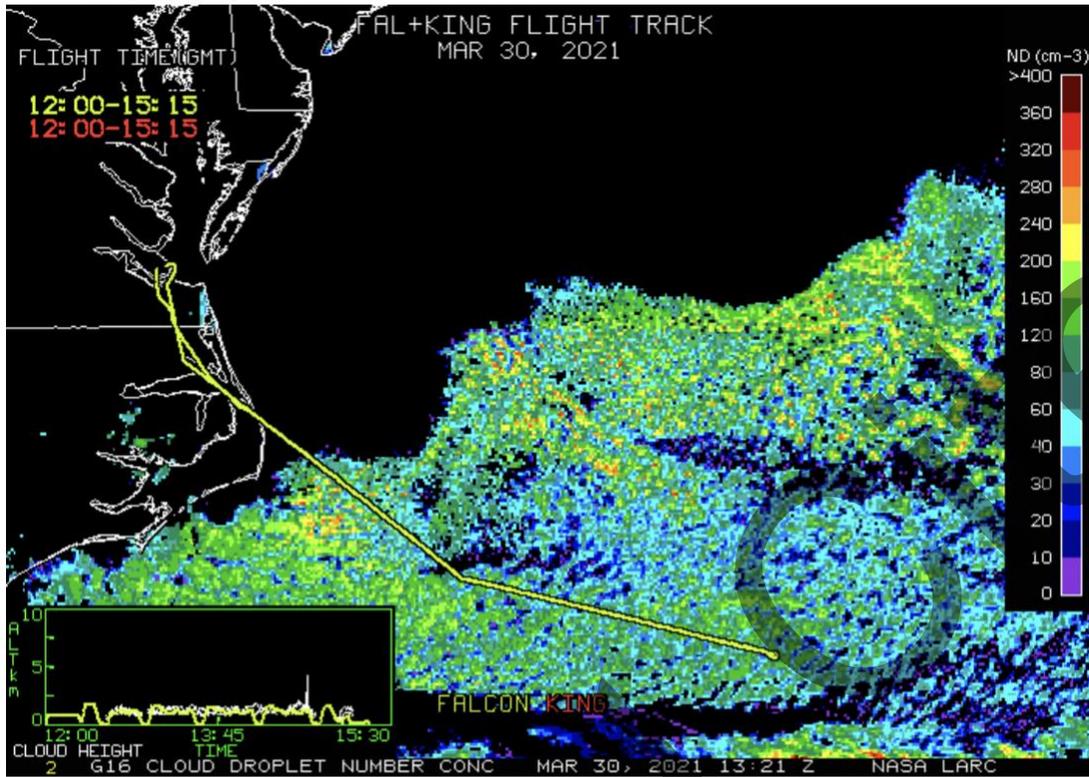
NASA-LaRC Clouds Group GOES-16 Quicklook Images for Flight 58, 13:21 UTC Mar 30, 2021
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm-3)



Cloud-Top Height (Kft-ASL)

